STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forestland proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: **Impulse** *Agreement #:* **30-076367**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:

   Pacific Cascade Region
   601 Bond Road
   PO Box 280
   Castle Rock, Washington 98611-0280
   Phone: (306) 274-2035
   Contact Person: Eric Wisch

4. Date checklist prepared:

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* **FY-2005**
   b. *Planned contract end date (but may be extended)* **FY-2007**
   c. *Phasing:* **Not applicable**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Yes

   Timber Sale

   a. *Site preparation:* **Site preparation will be completed concurrently with timber sale harvest with the use of mechanical slash piling where gentler slopes make this possible. Herbicide application may be utilized prior to hand planting of seedlings.**
   b. *Regeneration Method:* **The majority of the harvest area of the sale will be planted with Douglas-fir seedlings. The remainder of the harvest area (those areas with wetter soils) will be planted with western red cedar.**
   c. *Vegetation Management:* **May include application of herbicide or hand slashing of competing vegetation.**
   d. *Thinning:* **Precommercial thinning around age 15 if needed. Commercial thinning at age 25-35.**

Roads: **Road maintenance assessments will be conducted periodically as needed and may include periodic ditch and culvert cleanout and road grading will occur as necessary.**

Rock Pits and/or Sale: **None. Rock will come from a commercial source.**

Other: **Direct sale of firewood from the sale area may occur following harvest completion. Firewood salvage of logging residue may occur following harvest.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐*303 (d) – listed water body in WAU:* ☐*temp.* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **Road Plan available at Southwest Region**
☐*Wildlife report:*
☐*Geotechnical report:*
☐*Other specialist report(s):*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☐*Rock pit plan:*
☒*Other:* **Spotted owl habitat mapping, marbled murrelet reclassified habitat maps, Forest Practices Activity Maps, WAU map for rain-on-snow areas, Forest Resource Plan (DNR, July 1992), State soil survey, DNR GIS databases, Habitat Conservation Plan (January, 1997), HCP Checklist (attached), Slope Stability Checklist, Planning and Tracking Special Concerns Report and associated maps.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

NO

10. List any government approvals or permits that will be needed for your proposal, if known.

☒*HPA:* **Blanket HPA for type 4 and 5 waters** ☐*Burning permit*
☐*Shoreline permit*
☐*Incidental take permit* ☒*FPA* **2910395** ☐ *Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

Sale of Timber
Estimated Total Volume: 3800 MBF
Unit 1: 3800 MBF

Unit area (acres):

Unit 1: Gross Proposal Acres: 93
Leave Tree Acres: 4
RMZ Acres: 12
Net Harvest Acres: 77

Total Proposal Area Acres (Gross): 93
Total Leave Tree Acres: 4
Total RMZ Acres: 12
Total Net Harvest Acres: 77

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

Overall Unit Objective: The objective for this timber sale is to provide sustainable financial benefit to trust 01 (Forest Board Transfer) and trust 03 (Common School Indemnity). Objectives for the unit include the production of sawlogs, poles, and pulp material while concurrently manipulating the stand to enhance wildlife habitat by developing vertical stand structure and age class distribution. This may be obtained through the retention of wildlife clumps and legacy trees. In addition, this stand will be managed in a manner that protects site productivity and maintains the integrity and water quality of adjacent streams.

Pre-harvest Stand Description: This unit is a mixed stand where the north and eastern portions are predominately Douglas-fir, and western red cedar, and the southwest and southern portions are a mix of Douglas-fir, western red cedar, big leaf maple, and red alder. The ground cover throughout the unit is sword fern, and red huckleberry. This unit is approximately 73 years old.

Harvest Systems: This proposal is an even aged harvest of 77 acres in one unit. There will be scattered leave tree clumps within the proposal. The harvest systems for this proposal will be 100% ground based. Ground based systems will be used on slopes less then or equal to 40%.

c. Road activity summary. See also forest practice application (FPA) for maps and more details.

Roadwork is outlined below, with site-specific details in the timber sale road plan available at the Pacific Cascade Region office.

This proposal contains a small amount of road work. P1100 reconstruction, is 1300 feet of reconstruction on an existing power line access road. This road is being reconstructed to access the south west portion of the proposal. The P1100 reconstruction will require ditch construction, culvert installation, spot patching, and the application of 12" lift of 4 inch minus rock, which will be shaped and grid rolled. An extra 20 yards of 4 inch minus rock will be placed at the end of the reconstruction to create a landing. The P1100 will be left as an active road to continue its function as a power line access road.

There will be approximately 8500 feet of prehaul maintenance for this proposal. This includes, a portion of the P1100 road from the beginning of the P1100 reconstruction to the P1000 (500 feet), the P1000 to the county road (7000 feet), and Spur A (1000 feet). Prehaul maintenance will mainly include road grading. Spur A, which is a relatively new road, will only require ditches to be cleaned out.

Rock Pits: There will be no rock pits associated with this proposal. All rock that is needed for road construction will be obtained from a commercial source.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		**0**	**0**	**None**
Reconstruction		**1300**		**None**
Abandonment		**0**	**0**	**None**
Bridge Install/Replace	**0**			**None**
Culvert Install/Replace (fish)	**0**			**None**
Culvert Install/Replace (no fish)	**3**			

Temporary roads: A temporary road is defined in Forest Practice rules as a forest road that is constructed and intended for use during the life of the approved forest practices application. All temporary roads must be abandoned in accordance with WAC 222-24-052(3). The length listed above is also included in the "Construction" and "Abandonment" sections of the chart below.

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description: **The harvest area is located in Section 7, Township 10 North, Range 2 West, W.M.**

b. *Distance and direction from nearest town (include road names):* **This proposal is located approximately 8 miles north, northwest of Castle Rock, Washington. The route from Castle Rock is via State Road 411 to Agren Road, then immediately take Olequa Heights Rd. Then follow Olequa Heights Road and take a right on McCrory Rd. The End of McCroy road is the beginning of the P1000. The P1000 leads directly to the proposal. See timber sale vicinity map for more details.**

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

WAU Name	WAU Acres	DNR WAU Acres	Sub-Basin Number	Sub-Basin Acres	DNR Sub-Basin Acres	Proposal Acres in Sub-Basin (estimated)
Delameter	**38516**	**2613**	**1**	**1043**	**558**	**3**
			3	**1668**	**932**	**90**

The acreages listed above are from DNR /HCP/ WAU data layers.

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*

The Impulse timber sale, is a one unit, even-aged harvest located just north of Rock Creek, about 2 miles west of the Cowlitz River. This proposal is located in the Delameter WAU. There are 38,516 acres in the Delameter WAU, 2613 acres managed by the DNR, and the rest are privately owned timberland and a small amount of rural residences and farms.

There has been periodic harvesting on both state and private lands, in and around the WAU. The Impulse timber sale is located in a section that contains both private industrial forest land, and state land. Private industrial forest land is located to the northwest, west, and east of the harvest unit. Within section 7, in the last 10 years there has been about 99 acres of regeneration harvests, and 121 acres of pole harvests (partial-cuts). Currently, within this section, there is a potential for 91 acres of commercial thinning, and 177 acres of regeneration harvest within the next 5-10 years. The large industrial landowners that exist within the Delameter WAU have conducted periodic thinnings, and regeneration harvests. After harvest, approximately 66% of the land managed by DNR within the Delameter WAU, will contain stands greater than 25 years old.

Within the Delameter WAU, effects of recent management practices may have slightly increased the peak flows of surrounding streams, the frequency of mass wasting events, and an increase in sedimentation (based on local knowledge and observations). To assure this proposal will not contribute to an increased chance of environmental impact, several mitigative measures have been included in the proposal. The type 3 and 4 streams within the proposal have been given the appropriate buffer width, in compliance with the 1997 Habitat Conservation Plan, Forest Resource Plan, and Forest Practice Rules. To ensure soil protection, soils exposed during road construction will be seeded with grass and/or straw will be applied. Haul routes for this proposal have been evaluated for potential impact to the environment. To assure sediment delivery is controlled during active haul routes, cross drains, sediment ponds, and other structures will be used to disconnect ditch water from live streams. Ditch water will be routed to the forest floor for filtering prior to entering live water courses. Also, to preserve structural diversity for wildlife habitat, individual legacy trees, and wildlife tree clumps have been identified for retention throughout the proposal. There are a minimum of 618 trees that have been left to meet the above objectives. Following harvest the site is planned to be replanted with Douglas-fir, and Western red cedar.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☒Rolling, ☐Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

This proposal lays within the Delameter WAU. The Delameter WAU contains a variety of land forms ranging from pasture and farm lands along the Delameter and Arkansas drainages, to the Cowlitz River bottom at less than 160 feet in elevation, to feeder streams located at the 2400 foot elevation on Abernathy Mountain where timber is grown. Slopes vary from 0% to 90%. Rain fall averages 40 inches in the lower lands to 120 inches in the higher elevations around Abernathy Mountain. Major timber types are alder and Douglas-fir. The Delameter WAU's major drainages are Monahan Creek, which flows into Delameter Creek, which flows into the Cowlitz River and Arkansas Creek, which also flows into the Cowlitz River.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

This proposal, ranging from 720 to 1080 feet of elevation, lies in the far north of the Delameter WAU. The land is very similar to other areas of the WAU, in that it is a mix of Douglas-fir and alder. The sale proposal contains slopes from 0-55%. The majority of the slopes are around 20% with a small portion of the proposal containing slopes up to 55%. All water within the proposal drains into Rock Creek, which then drains into the Cowlitz River.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope on the site is 55%, this is in the northwest portion of the proposal.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

The acres listed in the soils table below are for those areas where timber harvest takes place.

State Soil Survey #	Soil Texture	% Slope	Acres	Mass Wasting Potential	Erosion Potential
5681	**Olympic Gravelly Silt Loam**	**20-30**	**37**	**Insignificant**	**Medium**
5687	**Olympic Silt Loam**	**8-20**	**40**	**Insignificant**	**Medium**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

The Slope Stability Model and aerial photos show no indications or history of unstable soils in the immediate vicinity. After an extensive field check, no evidence of unstable soils were found within or near the proposal.

2) Is there evidence of natural slope failures in the sub-basin(s)?
☒*No* ☐*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

Local knowledge indicates there is evidence of ancient deep-seated landslides in the upper headwaters of the Delameter WAU, but none within sub-basins 1 and 3.

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

It appears there have been fill and side cast failures associated with old railroad grades due to their construction techniques of the time.

Associated management activity:

On DNR managed lands, potentially unstable roads have been identified through the RMAP procedure, and will be abandoned or relocated closer to ridge tops where the ground is more stable. All land within sale boundaries has been evaluated for unstable slopes, and ground identified as unstable has been removed from harvestable areas.

4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

There are no similarities between this proposal and where previous failures have occurred.

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

Slope stability protection measures:

- **New roads have been located to avoid any identified potentially unstable areas.**
- **All identified unstable areas have been excluded from the harvest areas.**
- **Proper ditch construction and culvert sizing.**
- **Lead end suspension on all cable yarding.**

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: 0.0 Approx. acreage new landings: 0.1 Fill source:

Fill source is native earth material.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Yes, some incidental erosion may occur as a result of this proposal, but should be confined to the associated roads and harvest area. See B. 1. h. below for mitigation.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

_1_% of the proposal will be in permanent rocked running surface.

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

Protection measures to reduce erosion associated with roads:

- **Seasonal timing restrictions will be used to minimize environmental impacts from road construction activities during wet weather conditions.**
- **Soils exposed during road construction, including any waste areas, will be treated with erosion control measures, such as re-vegetation.**
- **Roads will maintained as needed to control water runoff and avoid delivery of sediment to live water.**
- **Drainage structures will be properly installed and maintained.**
- **Sediment control measures will be used as necessary during active haul to prevent sediment delivery to water.**
- **Timing restrictions or temporary road shutdown will be used as necessary during active haul to prevent sediment delivery to water.**
- **Periodic maintenance and inspection of the road system to insure proper function.**

Protection measures to reduce erosion associated with active logging operation:

- **Ground yarding will be restricted to slopes less than _40_%.**
- **Ground yarding restrictions will be prescribed to minimize soil impacts including compaction and rutting.**
- **Skid trails will be water barred as necessary to minimize sediment delivery to live water.**

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Minor amounts of engine exhaust from logging equipment and dust from vehicle traffic and logging equipment.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

All streams have been typed using the Interim Water Typing criteria in the Forest Practices Rules.

a) Downstream water bodies:

All streams within the proposal area eventually flow into Rock Creek. Rock Creek flows into the Cowlitz River. The Cowlitz River flows into the Columbia River.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
None	**3**	**2**	**190**
None	**4**	**5**	**100**
None	**5**	**4**	**0**

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

The Type 3 stream that runs into the center of the unit and the Type 3 stream that makes up a portion of the southern boundary, were given an average 190 foot riparian management zone. The five Type 4 stream segments were given a 100 foot riparian management zone. The four Type 5 stream segments were left with no riparian zone. Also, in and around the Type 5 stream segments, Red Cedar is planned to be planted at 350 trees per acre, as part of the silvicultural prescription.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

Falling and yarding of timber will occur within 0-50 feet of the type 5 waters in the proposal, and it will occur within 200 feet of the type 3 streams, but not within the appropriate RMZ width of 190 feet. Falling and yarding of timber will occur within 200 feet of type 4 streams, but not within the appropriate RMZ width of 100 feet.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☒*No* ☐*Yes, description:*

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) *Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?*

Yes, this condition is present where head walls exist or on steep slopes where unstable soils are present. High proportions of eroded material could only enter surface waters if a major weather event occurred. However, none of these conditions exist within the harvest proposal.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐*No* ☒*Yes, describe changes and possible causes:*

There is evidence of minor changes in stream channels due to heavy amounts of rainfall in short periods of time.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☐*No* ☒*Yes, explain:*

Due to the careful planning during the design of this proposal, there should be little impact on water quality. The RMZ's and leave areas inside the harvest area should provide more then adequate protection to the streams and water quality in the area. This proposal may cause some minimal increase in sedimentation as a result of road construction and harvest operations. Buffered riparian areas will help preserve natural stream and water quality conditions.

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?

In the Delameter WAU there are 6.7 miles of road per square mile. In sub-basin 1, there is 6.7 miles of road per square mile, and in sub-basin 3, there is 6.1 miles of road per square mile.

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

*11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☒*No* ☐*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☐*No* ☒*Yes, describe observations:*

In the winter of 1996, a 100-year event occurred. The rainstorm set rainfall and flood level records in Southwest Washington and Northwestern Oregon. The event caused many shallow mass-wasting events. Many stream channels were affected by this flood event. The full extent if this is not known. Many channels were altered in this event, due to high stream flows with accompanying sediment loads and possibly large woody debris delivery.

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*

This proposal may slightly change the timing/duration/amount of peak flow; flow rates may increase slightly during low flow periods during the first decade of the new forest. See B.33a.16 below.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☒*No* ☐*Yes, possible impacts:*

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

The current guidelines for HCP implementation include several prescriptions that address the potential for peak flow impacts. First, there will be a minimum of 618 leave trees left on site to assist in soil protection and provide a natural seed source for the next stand of trees. In addition, riparian management zones have been created along the type 3 and 4 streams, which will limit sediment delivery into live waters. For more details see B.1.h.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Minor amounts of oil, fuel and other lubricants may inadvertently be discharged to the ground as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☒*No* ☐*Yes, describe:*

a) Note protection measures, if any.

This activity should not cause changes in ground water that could affect downstream or down slope water resources. The riparian management zones that have been place along the type 3 and 4 streams within the proposal, and the leave tree locations, should mitigate any possible impact.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water will be collected in the ditches and culverts and discharged onto the forest floor.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Minimal logging slash may enter surface water.

a) Note protection measures, if any.

None.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

1. **Improve drainage on roads, including the installation of culverts to return streams to natural channels and disconnect ditchwater from the streams.**
2. **Add energy dissipaters as needed to new and existing culverts.**
3. **Use seasonal restrictions on ground yarding, road construction, reconstruction, and abandonment.**
4. **Maintain RMZs to protect the streams.**
5. **Fall and yard away from the type 5 streams as needed.**
6. **Apply seed or other surface stabilization as needed on exposed soils.**
7. **Water bar skid trails as needed.**

See B.1.h above for additional erosion control measures.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☒*salal,* ☒*other: Oregon grape*
☒grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☒other types of vegetation: sword fern
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

All conifer and hardwood trees, except approximately 618 Wildlife Reserve and Green Recruitment trees, will be removed as part of this timber harvest proposal. Understory vegetation will be disturbed and /or reduced within the proposed harvest area as a result of timber felling and bucking operations.

1) *Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")*

Immediately adjacent to the west of the proposal area is a large (400' wide) powerline Right-of-Way. To the north is a 70 year old stand of mixed conifer and hardwoods, very similar to the proposal area. To the south and east are approximately 30 year old plantations of DF.

2) *Retention tree plan:*

Retention trees are generally scattered throughout the unit in small clumps of 10-40 trees each. Several structurally unique trees are included in these clumps.

c. List threatened or endangered *plant* species known to be on or near the site.

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None				

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

See A.11.b.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☐songbirds, ☒*pigeon,* ☐other:
mammals: ☒deer, ☒bear, ☒elk, ☐beaver, ☒other: coyote, cougar, squirrel, chipmunk, rabbit
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

Salmonids are known to be present in the Cowlitz River.

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

This proposal is located within Lower Columbia River Evolutionarily Significant Units for threatened Steelhead and Chinook and threatened Columbia River Chum Salmon.

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

This proposal is located in the Columbia River flyway. Many Neo-tropical birds are closely associated with riparian areas, cliffs, snags and structurally unique trees. Riparian areas and special habitats are protected through implementation of DNR's Habitat Conservation Plan. Migratory waterfowl also use the Columbia River flyway. However, the area for this proposal is not generally the type of area used for resting or feeding by migratory waterfowl.

d. Proposed measures to preserve or enhance wildlife, if any:

This activity conforms to the 1992 Forest Resource Plan, the 1997 Habitat Conservation Plan and Forest Practices rules and regulations. Approximately 618 trees will be left scattered and clumped throughout the proposed area. Scattered Leave Trees will provide roosting sites for many species of birds, and the clumped Leave Trees will provide potential nesting sites. The RMZ areas will protect and maintain habitat for riparian obligate species and will provide hiding cover, shade, and thermal cover for many types of wildlife.

1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.

None.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Minimal health hazards due to operating heavy equipment and the minor spillage of fuel and lubricating oils are always present with this type of operation. Contractual clauses require operators to use established safety standards. The risk of forest fire may be increased for approximately two years following harvesting due to logging slash.

1) Describe special emergency services that might be required.

Department of Natural Resources, private and rural fire department fire suppression resources; emergency medical or air ambulance for personnel injuries. Hazardous material spills may require Department of Ecology and/or county assistance.

2) Proposed measures to reduce or control environmental health hazards, if any:

Fire equipment will be required on-site during closed fire season. Operations will cease if relative humidity falls below 30%.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Heavy equipment, chain saws, yarding whistles, and trucks will produce noise during periods of operation.

3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

- **Timber Production, Forest management**

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

None.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

None.

f. What is the current comprehensive plan designation of the site?

Forest Land.

g. If applicable, what is the current shoreline master program designation of the site?

Not Applicable.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

This harvest unit will be reforested with commercial species and retained as forestland.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

The harvest activities will be imperceptible from public roads in the area.

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☒*No* ☐*Yes, viewing location:*

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒*No* ☐*Yes, scenic corridor name:*

3) How will this proposal affect any views described in 1) or 2) above?

The majority of the surrounding land in this area is utilized for timber production. Therefore, even-aged harvest is common in this area.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Reforestation will be completed after harvest. Riparian management zones, and leave tree areas, occur through out the unit.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Hunting, Mountain Biking, motorcycle and ORV riding.

b. Would the proposed project displace any existing recreational uses? If so, describe:

Recreational activities may be temporarily interrupted during periods of operation on the site.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None were found in a search of the TRAX system or are known by local knowledge.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

None.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

See A.12.b and the timber sale vicinity map.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

No.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No.

c. How many parking spaces would the completed project have? How many would the project eliminate?

None.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Some new forest roads will be constructed and some existing roads will be improved. See A.11.c for details.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

There will be no impact from this proposal.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

During harvest, 25-30 vehicle trips per day to the sale area may occur. This will take place for three to four months. Upon completion of harvest activities, traffic levels will vary depending on seasonal use.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

None.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: _____ Date: _____
Title

Reviewed by: _____ Date: _____
State Lands Assistant Manager

Comments: _____